

## Influence of urbanization upon crime

**Abstract:** The most vital elements of CPTED (a multidisciplinary approach to crime prevention through environmental design) are natural surveillance, natural control access, territorial reinforcement (through designing the arrangement of vital elements), as well as management, maintenance and surveillance (following the theory of 'broken windows'). The figures of the programme conducted by the Dutch Police – Quality Sign 'Safe Flat' indicate that the burglary rate in the areas which meet the safe space requirements is twice as small as that of the standard ones. The principles for designing safe spaces and their impact on the crime rate have been examined as part of a research programme carried out in Szczytno, a small town in north-eastern Poland. The research outcome has been presented in the article.

**Keywords:** crime prevention, public space, safety improvement, revitalizing public space, environmental design.

Abraham Maslow believed that human needs create a certain hierarchy, from physiological needs up to the need for self-actualization. A natural way of human development goes from satisfying basic needs to higher levels in this hierarchy including the following types of needs:

1. Physiological needs: hunger, thirst, rest, avoiding pain, maintaining the right temperature, reducing sex drive.
2. Need for safety: protection against unfriendly environment through one's homestead and clothes, protection against crime and financial problems.
3. Need for love and acceptance: being loved and accepted by others through maintaining intimate relations and friendship as well as through creating social groups. Maslow claimed that in societies where physiological needs are satisfied, most feelings of frustration have their source in the needs of this level not being fulfilled.
4. Need for self-esteem and respect of others: achievements, being competent, being approved by others, respect, prestige, status.
5. Need for self-actualization: realizing one's own individual potential. For many people it refers to satisfying cognitive needs (newness, exploration, understanding and knowledge) and aesthetic ones (art, beauty, order)<sup>2</sup>.

The twenty first century terrorist attacks in New York, Madrid, Moscow, Bieslan and London seem to confirm the thesis that the need for safety is the most important one to human beings.

In 1951, the American Institute of Architecture recognized the Pruitt-Igoe housing estate, designed by Minoru Yamasaki, the best project of the year. The housing estate consisted of 33 identical eleven-storey concrete blocks of flats. Situated in the southern part of each building, spacious glass galleries were supposed to serve as a place for meetings and integration, (see photo 1).

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1 SPENCER A.R., Psychologia współczesna, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2004, pp. 445-446.



**Photo 1.** View of Pruitt-Igoe. On every third floor each building had communal corridors, a communal room, and a garbage room with a chute. Photo by O. Newman, *Creating Defensible Space*, 1996.

However, the matters did not go as it had been planned. After a few years, the housing estate looked as in the photo below, (see photo 2).



**Photo 2.** O. Newman, *Creating Defensible Space*, U.S. Department of Housing and Urban Development Office of Police Development and Research, 1996.

The housing estate was overrun with teenage gangs, and the fear of becoming a crime victim was so great that the residents of the housing estate, mainly women, decided to leave its premises. Their decision was made while talking on the phone.

The only way to solve crime problems at the Pruitt-Igoe housing estate was to pull it down. After twenty years since the housing estate was designed and several dozen years since it was built, the Pruitt-Igoe was demolished, (see photo 3).



**Photo 3.** O. Newman, *Creating Defensible Space*, U.S. Department of Housing and Urban Development Office of Police Development and Research, 1996. **In 1972 Pruitt-Igoe was pulled down, at a loss of 300 million dollars.**

O. Newman examined the phenomena occurring at both the Pruitt-Igoe premises and the nearby Carr Square Village housing estate, which were different as regards the height of buildings, (see photo 4).

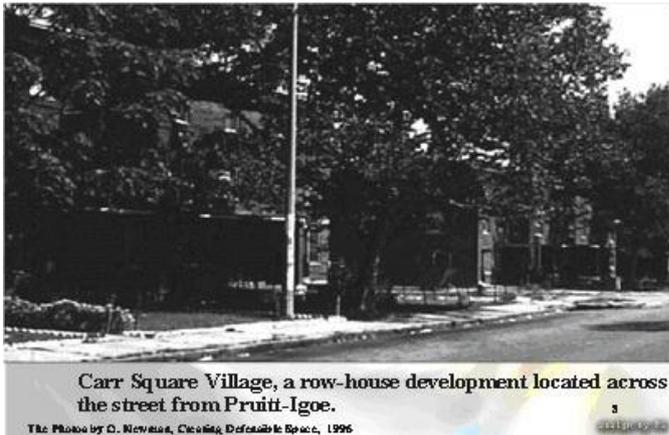
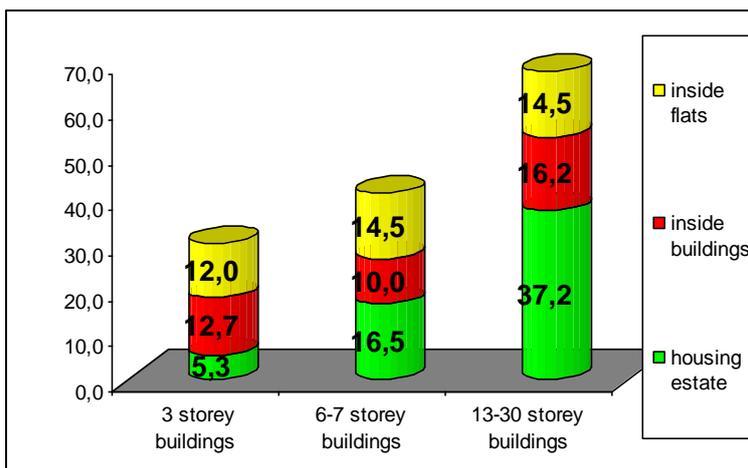


Photo 4.

It turned out that despite a similar ethnic structure and the wealth of residents living in the two housing estates, the rate of crime was higher at the Pruitt-Igoe. In his research Newman concluded that the higher the buildings are the higher the crime rate is. What is more, the number of committed crimes was bigger in the exterior than interior of the Pruitt-Igoe. In staircases and inside the flats, there was no difference in the number of committed crimes, (see graph below).



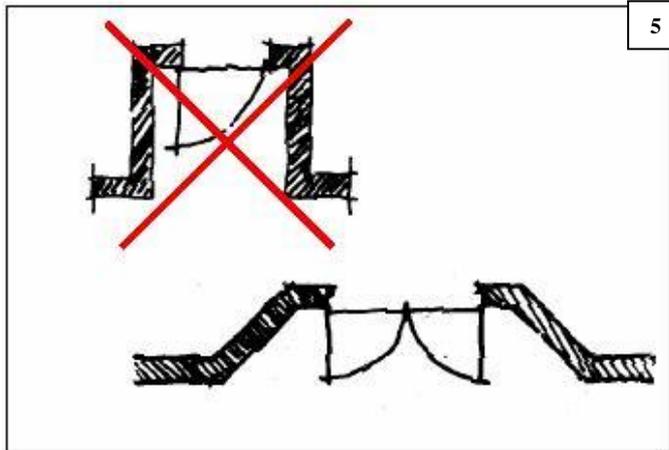
Source: O Newman, Creating Defensible Space, 1996

To design appropriate and safe housing estates, we need not only technical solutions but, first of all, well-established and maintained social bonds among their residents. Based on experience and research, there has emerged a theory of fortified space of the second generation which combines both technical and social aspects.

Basic concepts of CPTED strategy are as follows:

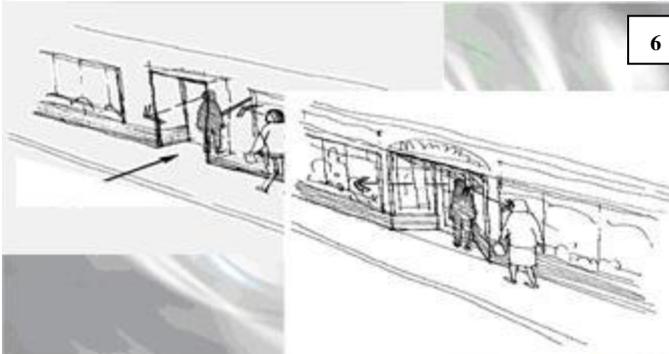
**Natural surveillance**

The arrangement of devices, lighting, buildings and human activities in such a way as to maximize visibility and increase chances of noticing an intruder, (see photos 5, 6).



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**Photos 5 and 6.** Planning out crime in Northamptonshire. Supplementary planning guidance. Northamptonshire County Council 2003.

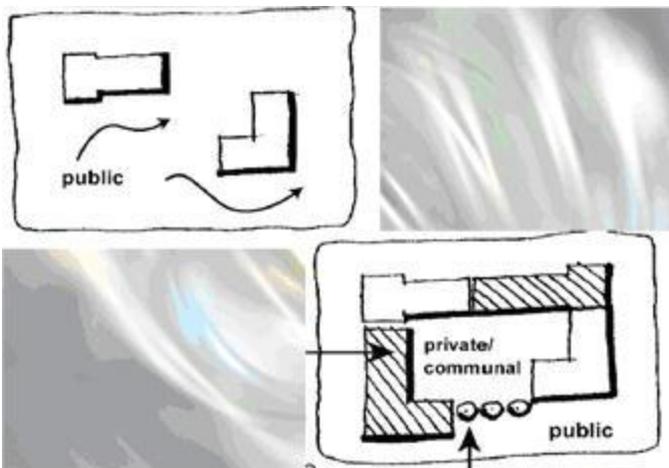


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Benches have been turned away, which forces people to watch the surroundings. Thanks to a well-designed door alcove, women can spot potential assailants and undertake adequate preventive actions, for example, to put her bag in the other hand or go across the street (photo 5 and 6).

### Natural access control

The placement of entrances, exits, fences as well as well-designed greenery and other elements of physical space in such a way as to deny access to unauthorized people and to ensure safety for authorized ones. A suitable arrangement of car parks and devices as well as localization of buildings and organization of pedestrian and motor traffic facilitate both entering and leaving a housing estate freely. Such environment arrangements make it possible for people to be watched, which prevents crimes from being committed.



**Photo 7.** O. Newman, Creating Defensible Space, U.S. Department of Housing and Urban Development Office of Policy Development and Research.



In the photos above, we can see two multi-family buildings – with the public space around, which can cause heavy traffic and, as a result, some difficulties in recognizing their residents. The suggested solution creates a semi-private space inside the housing estate (see photo 7). If people know each other well, they will recognize a stranger. Any housing estate does not need to be surrounded by fences, but it should include half a meter of greenery, flower pots and well-kept lawns. Not motor but pedestrian traffic is possible here, (see photos 8, 9).

### **Territorial reinforcement**

The placement of buildings, fences, pavements, signs, notices and street benches, using the right paint colors, designing greenery and establishing borders in such a way as to inform others who owns a given piece of land, and to divide the space into four parts: public, private, semi-public and semi-private. Borders, clearly established, provide information who the owner of an area is. People gain respect for someone else’s property if the border line is clearly specified. The gate in the photo, which always remains open, is not an obstacle but it constitutes a distinguishing feature of the estate site, informing passers-by that they are entering the housing estate (see photo 10).



**Photo 10.**

Colored pavements, local access roads and road signs informing that cars have to give way to pedestrians are also of great importance to the subject matter, (see photo 11).



Photo 11.

### Management and maintenance

Equipment in bad technical condition and ill-maintained devices indicate that the property lacks care, which encourages some people to commit crimes. The need to make repairs on regular basis should be already taken into account in the phase of designing a housing estate. For example, plants should be carefully chosen in advance to avoid being trimmed when growing. Using materials and constructions of high quality and those resistant to damages reduces the number of extra repairs. Management and maintenance can be referred to the theory of 'broken windows'. The authors of the theory tried to prove that there is a connection between serious crimes and minor infringements of law or social standards. They claimed that failure to react to disturbances or petty offences make perpetrators more encouraged, and law-abiding citizens indifferent, which results in the increase in the number of committed crimes. The more crimes are committed the greater the fear of becoming a victim appears. Law-abiding people become less active and, consequently, the number of crimes increases. In the photo below, street lamps covered by trees and bushes do not illuminate the pavement (see photo 12).



Photo 12.

Big bushes seem to invite criminals to this housing estate (see photo 13).



Photo 13.

### DUTCH POLICE PROGRAMME QUALITY SIGN “Safe Flat”

The Dutch have developed a program of grants for buildings which fulfill specified standards of the Police Quality Sign called “Safe Flat”. The Dutch defined 23 mandatory requirements and 28 additional ones, from which 17 have to be met.

Among the requirements there is one according to which in order to diversify buildings in a one-storey building area, a multi-storey building has to be built to serve as ‘social eyes’, when residents of one-storey buildings leave for work, school or holidays (see photo 14).



Photo 14. Received from Nico von Ooik

Well-arranged plants do not reduce visibility, and colors of pavements separate reinforced public, semi-private and private spaces (see photo 15).



Photo 15. Received from Nico von Ooik

A separated playground for children makes it impossible to go into a designated area by car, from well-arranged benches people can be watched, and well-kept greenery makes it possible to watch the entire playground from the surrounding houses, (see photo 16).



**Photo 16.** Received from Nico von Ooik

Car parks are of the same color as pavements, (see photo 17).



**Photo 17.** Received from Nico von Ooik

At housing estates, however, the most important thing is that it's impossible to move around the site without being noticed by its residents. Many residents often asked us questions why we were there and why we were taking photos. We were really amazed at their feeling of territorial integrity and responsibility. As a result of research, conducted in selected regions, it turned out that an average number of break-ins into flats amounted to 20 break-ins out of 1000 flats per year, i.e. 2%. At housing estates which met the standards of the 'Police Quality Sign' it reached 1%, i.e. one break-in out of 1000 flats a year. What is even more important, at least 90% of people agree on the fact that the 'Police Quality Sign' guarantees the feeling of safety, 75% want to be awarded with the quality sign if they had another flat, and 66% agree to bear any extra costs to live in a "safe flat".

Space arrangement features and their impact on crime rate have been checked as part of the school's research project. In photos, there is a town park in Szczytno, a small town in the north-east of Poland. Look at the photo below.



**Photo 18.**

**What can you see in this photo?**

- Certainly, bushes, trees, grass.

**But can you see three young people smoking cigarettes?**

- You can only see smoke coming out and teenagers are hidden behind this big tree.

On a bright and sunny day the park was deserted. There were no mothers with their children but there were some suspiciously looking people (see photo 19,20).



**Photo 19.**



**Photo 20.**

In the park, one could drink a beer and relieve oneself, without any risk of being caught red-handed. Now, the park looks completely different. Those are photos showing the difference. I can assure you that on a sunny day there are a lot of people, including mothers with their children. However, revitalization of the park was not an easy task to implement. Even in local newspapers many disapproving articles appeared, saying that instead of trimming trees, more police officers and municipal guards should patrol the park. Now, we know that cutting out unnecessary branches was a form of a fight against the reasons of negative behavior and policing the area would be only a fight against their effects.

A similar situation has been observed in a local kindergarten in Szczytno. In 2002, the kindergarten management staff asked police officers to solve a crime problem at the kindergarten premises. The place in question resembled the bright and dark sides of the moon. The bright one because from 7 a.m. until 4 p.m. there was an excellent atmosphere and care provided, but after 4 o'clock in the afternoon the kindergarten was left unsupervised. That was why the kindergarten premises were attractive to youngsters from surrounding buildings, who devastated the area and its equipment. In 2002, there were recorded more serious offences. One night, an offender climbed to 15 lamp posts and stole the lamps. Another night, thieves who stole electric wiring in another part of the town, brought it at the kindergarten premises in order to remove electrical insulation.

Because of everyday equipment devastations, the kindergarten staff changed their way of working. Every day before work, the kindergarten employees checked the equipment and removed devastated objects so that children could play safely at the playground. The photos below show the difference between 2002 and 2004.



Photo 21.



Photo 22.

As we can see, 6-metre-high bushes were trimmed. The photos, with a church tower in the background, present changes taking place between 2002 and 2004. Before the fence was redecorated it had several dozen holes, enabling anyone to enter the kindergarten premises instead of using the two gates only, (see photo 23).



Photo 23.

The most favorite place to gather for strangers after 4 o'clock in the afternoon was the kindergarten sandpit and the number of beer cans, left each night, seemed to prove their presence. Today, the sandpit looks as we can see in the photo 24.



Photo 24.

Now, a child playing in the sandpit is being watched by their peers from the balcony, which was impossible before.

And here is a house adjacent to the kindergarten. This is how it looked in 2002 (photo 25), even in late autumn, when there were no leaves on trees. And this is how it looks now (photo 26). The kindergarten premises can be watched from several dozen windows around.



Photo 25.



Photo 26.

Here is the entrance to the kindergarten taken in 2002 (photo 27), and how it looks now (photo 28). There is a notice on the board – authorized personnel only – it is of great importance for the police and municipal guard who can intervene successfully.



Photo 27.



Photo 28.

And here is the main entrance to the kindergarten (photo 29). This way parents go with their children to the kindergarten. And this is how it looks now (photo 30). Several dozen windows have appeared which make it possible to watch the road to the kindergarten.



Photo 29.



Photo 30

Apart from technical improvements, which have been discussed in brief above, an issue of great importance was that a community police officer had informed all people living next to the kindergarten what vital changes they could expect before they were implemented. Police officers asked those residents to inform about any suspicious behavior they would notice at the kindergarten premises.

Changes introduced from March 2003 to the end of 2005 resulted in only one crime having been committed at the kindergarten site. However, it was nothing serious. The kindergarten director bought playground equipment (photo 31, being fully convinced nobody could destroy it. The best way to test the threat of vandalism is a ‘lifetime’ of a cement stork. In 2003, on a spruce post, a nest dummy with a cement stork was installed (photo 32) When installing, the kindergarten employees were wondering how long the stork would stay undamaged. After four years, it was still in good condition.



Photo 31



Photo 32

The experiment conducted at the kindergarten did not solve any of the main crime problems. Any alternative activity young people could be engaged into was not suggested either. However, it made the area less attractive to people who want to remain unnoticed. At the same time, the experiment showed how important space arrangement features could be.

All changes presented in the photos were implemented without any extra costs. The expenses for a new playground, fence and gates were covered from the kindergarten money for repairing damages.

I'm sure, we can't knock down all both ill-designed or built housing estates, parks, roads or kindergartens. But, if we talk about it and promote effective practices for safety improvement, the United Europe may become the space of not only liberty and justice, but of safety as well.

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**Kľúčové slová:** prevencie kriminality, verejný priestor, zlepšenie bezpečnosti, revitalizácia verejných priestorov, environmentálne projektovanie.

### Súhrn

Najdôležitejšie prvky CPTED (crime prevention through environmental design) multidisciplinárneho prístupu k prevencii kriminality prostredníctvom ekologického dizajnu sú fyzická ostraha, fyzické kontroly prístupu, priestorového posilnenia (prostredníctvom

návrhov usporiadania dôležitých prvkov), ako aj riadenia, údržby a monitorovania (podľa teórie “rozbitých okien”). Informácie z programu uskutočneného holandskou políciou – Značka kvality “Bezpečný byt” ukazujú, že miera vlámania sa do priestorov, ktoré spĺňajú požiadavky na bezpečný priestor je dvakrát nižšia ako je štandard. Zásady pre navrhovanie bezpečných priestorov a ich vplyv na výskyt kriminality boli skúmané v rámci výskumného programu vykonávaného v Szczytne, malom meste na severo-východe Poľska. Výsledok výskumu bol prezentovaný v tomto článku.

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